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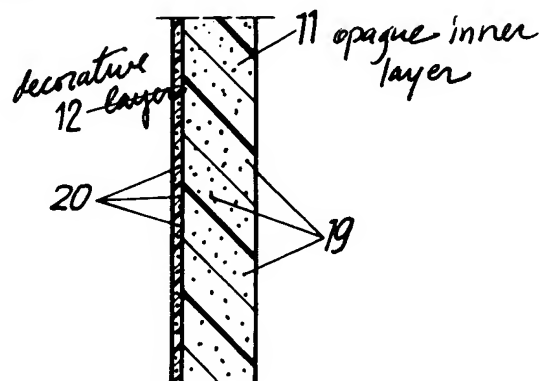
(54) Plant container of synthetic
thermoplastic material

(57) A plant container of a thermoplastic synthetic material has a bottom opening for the discharge of water, wherein the one-piece bottom and circumferential wall is formed of a laminate which contains an opaque layer 11 and an outer decorative layer 20. A further coloured layer may be provided between the layers 11 and 20.

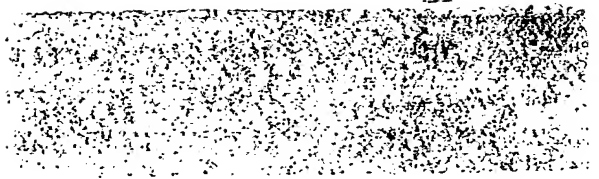
polypropylene
PVC

polystyrene

Fig. 2



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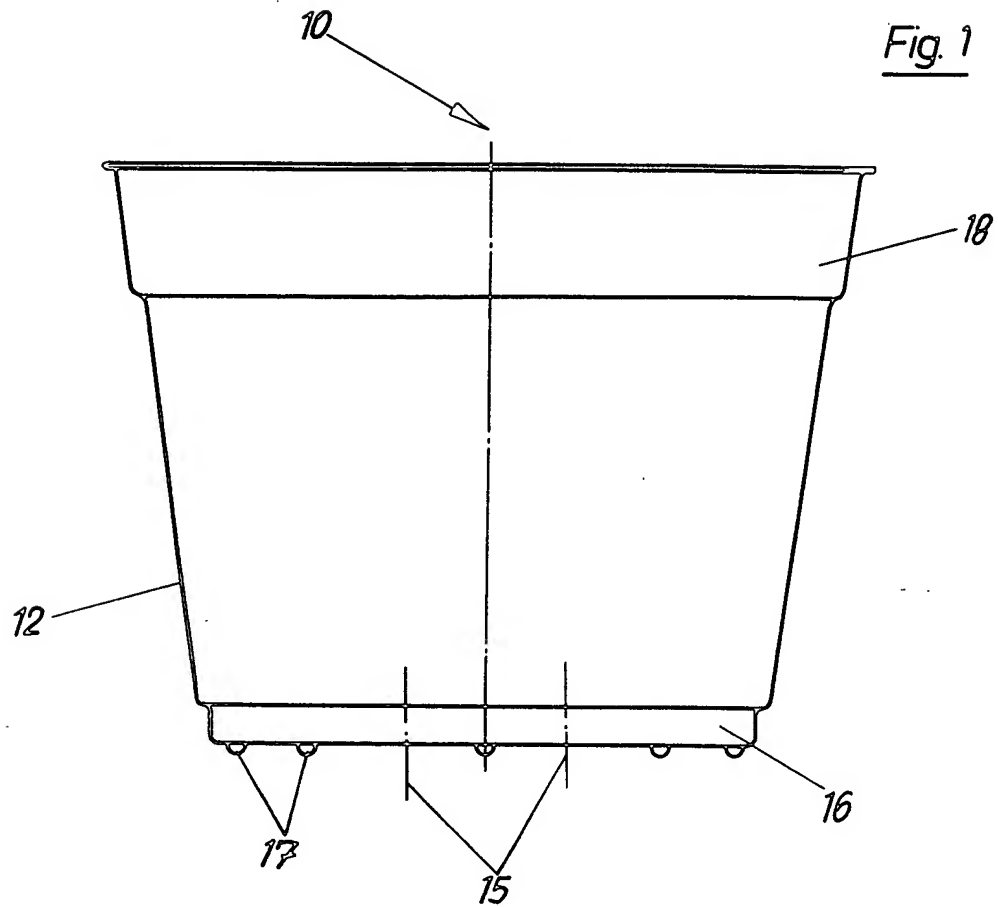


Fig. 2

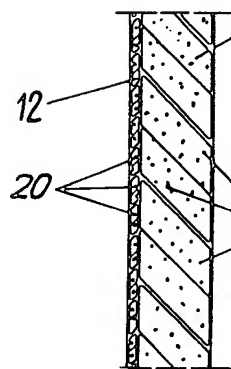


Fig. 3

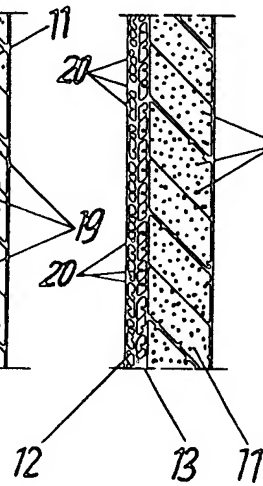


Fig. 4

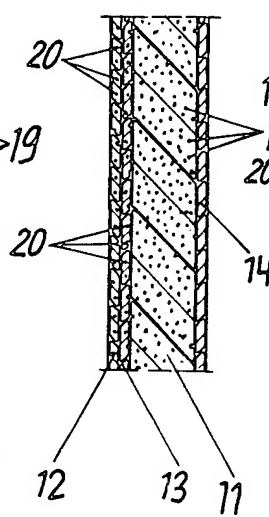
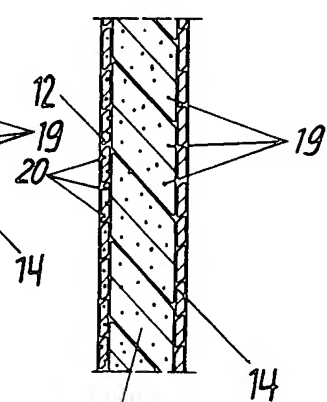


Fig. 5



SPECIFICATION

Plant container of synthetic thermoplastic material

5 The invention relates to a thin-walled plant container of a thermoplastic synthetic material having a bottom opening for the discharge of water.

From German Patent Specification 1729548 is known to form holes for the discharge of water in the bottom of cup-shaped containers which have been manufactured with thin walls from a thermoplastic synthetic material so as to be able to use such containers as containers for plants.

It has however become apparent, that such plant containers are not serviceable in practice, because the walls of such thin walled containers of synthetic material normally transmit so much light, that this is harmful to the root system of the plant. Besides, it is desired that the circumferential wall of such containers should present a decorative appearance and should as far as possible approximate the colour of flower pots or like plant containers. There thus arises the technical problem of providing an opaque wall with a decorative layer on its outer side.

15 In order to solve this problem it is proposed according to the invention, that the one piece bottom and circumferential wall of the plant container is formed from a laminate, which contains an opaque layer and an outer decorative layer.

30 It has turned out to be especially preferable to colour the opaque layer substantially black and to form it as the bearing layer of the plant pot wall. In this way it is possible to manufacture the opaque wall from scrap material for example left-over film from the production of articles from synthetic material or also recovered or recycled material and to fill it with the above-mentioned black pigments. This results in a substantial reduction in the cost of the plant containers. This cost reduction becomes all the more effective if this black-pigmented opaque layer can at the same time be used as the supporting layer of the plant container. This means, that on the one hand the thickness of this layer is sufficient to ensure opacity even with a moderate black colouring, and on the other hand the substantial part of the wall formed by the supporting layer is made from the cheap reused or waste material.

Further improvements and developments can be secured by forming the opaque inner layer as the support layer and overlapping it with a thin decorative layer. The decorative layer may advantageously be provided with a covering pigmentation of a desired colour.

In an advantageous embodiment the wall structure of the plant container can be formed in three layers, wherein the opaque layer is overlaid by a pigmented colour-shielding layer and the decorative layer is superimposed on this colour-shielding layer.

In a further advantageous embodiment a four-layer or three-layer wall formation can be provided by the addition of a further inner layer of a material which is benevolent towards roots to a two-layer or three-layer wall formation, respectively. In a particularly advantageous manner the wall structure of the plant container may consist of PVC, polystyrene, or

polypropylene.

Examples embodying the invention will be further described with reference to the accompanying drawings, in which:

70 Fig. 1 A plant container according to the invention in side elevation;

Fig. 2 A cross-section through a two layer wall structure;

75 Fig. 3 A cross-section through a three layer wall structure;

Fig. 4 A cross-section through a four layer wall structure; and

Fig. 5 A cross-section through a three layer wall structure of another embodiment.

80 Figure 1 shows a plant container 10 of which the bottom wall and circumferential wall are formed in one piece. At the bottom is provided a stacking ring which serves as a guarantee of the compatibility of a number of plant pots which can nest inside one another. The bottom openings 15 necessary for the discharge of water are formed in the bottom of the plant container by means of a known melting process. In order to achieve stability feet 17 are formed on the outer circumference of the plant container bottom.

At its open end the plant container 10 displays a broadened circumferential ring 18, which in the region of the opening takes the form of a flange where it is bent outwards substantially at right angles.

95 Figures 2 to 5 show embodiments of a wall construction of a plant container 10 of a synthetic thermoplastic material. Figure 2 shows a two layer construction of a bottom wall and circumferential wall formed in one piece. This laminate consists of an opaque inner layer 11, which also forms the bearing layer. The opacity of this inner layer 11 is achieved by a coloured pigment 19 embedded in it. This coloured pigment 19 is preferably black. By virtue of this black colouring of the inner layer 11 the transmission of light harmful to the roots is prevented. On top of this opaque inner layer 11 is applied by co-extrusion a decorative layer 12 as the outer layer. This decorative layer 12 is likewise provided with a covering pigmentation 20, which may be of a clayey brown colour, so that the plant container 10 can give the outer appearance of a ceramic container, especially a clay pot. According to the intended purpose the pigmentation 20 can alternatively be of another colour.

115 Figures 3 and 4 show between the opaque inner layer 11 and the outer decorative layer 12 an additional intermediate colour-shielding layer 13. This layer 13 also displays a pigmentation 20, which is similar in its colouring to the pigmentation of the decorative layer 12. This intermediate colour shielding layer 13 prevents the black opaque inner layer 11 from showing through the decorative layer 12.

Figures 4 and 5 show a wall construction of a plant container 10, in which the opaque inner layer 11 is overlaid by an additional layer 14. This additional layer 14 consists of a thermoplastic synthetic material non-harmful or beneficial to roots. The laminate shown in Figures 3 to 5 is also manufactured by co-extrusion.

130 The layers 11, 12, 13 and 14 of the laminate can be

based on the same material, for example PVC, polystyrene, or polypropylene. It is also possible to make the individual layer of the laminate from different thermoplastic synthetic materials, thus for example the opaque inner layer 11 which at the same time functions as the support layer can consist of polypropylene, which displays a high elasticity, and the outer decorative layer 12 can consist for example of wear-resistant PVC. The colour-insulating layer 13 and the inner layer 14 can for example consist of polystyrene.

In an embodiment which is not illustrated, an additional layer of clear, transparent Standart polystyrene can be applied over the decorative layer 12. This very thinly applied transparent layer of Standart polystyrene is extremely scratch resistant and thus provides additional protection against damage to the decorative layer 12 of the plant container 10.

CLAIMS

- 20 1. Plant container of a thermoplastic synthetic material having a bottom opening for the discharge of water, wherein the one-piece bottom and circumferential wall is formed of a laminate which contains an opaque layer and an outer decorative layer.
- 25 2. Plant container according to Claim 1, wherein the opaque layer is coloured substantially black and is formed as the bearing layer of the plant container.
3. Plant container according to Claim 1 or 2, having a two-layer laminated structure.
- 30 4. Plant container according to Claim 3, wherein the opaque inner layer is formed as the bearing layer and is overlaid by a thin decorative layer.
5. Plant container according to Claim 4, wherein the decorative layer is provided with a covering pigmentation of a desired colouring material.
- 35 6. Plant container according to Claim 1 or 2, having a three-layer structure in which the opaque inner layer is overlaid by a pigmented coloured insulating layer and the decorative layer is applied over this coloured insulating layer.
- 40 7. Plant container according to any of Claims 1 to 6, having a four or three-layer wall construction, in which in addition to a two-layer or a three-layer wall construction respectively, an additional inner layer
- 45 of a material which is benevolent towards roots is provided.
8. Plant container according to any of Claims 1 to 7, wherein the walls of the plant container consist of PVC.
- 50 9. Plant container according to any of Claims 1 to 7, wherein the walls of the plant container consist of polystyrene.
10. Plant container according to any of Claims 1 to 7, wherein the walls of the plant container consist
- 55 of polypropylene.